

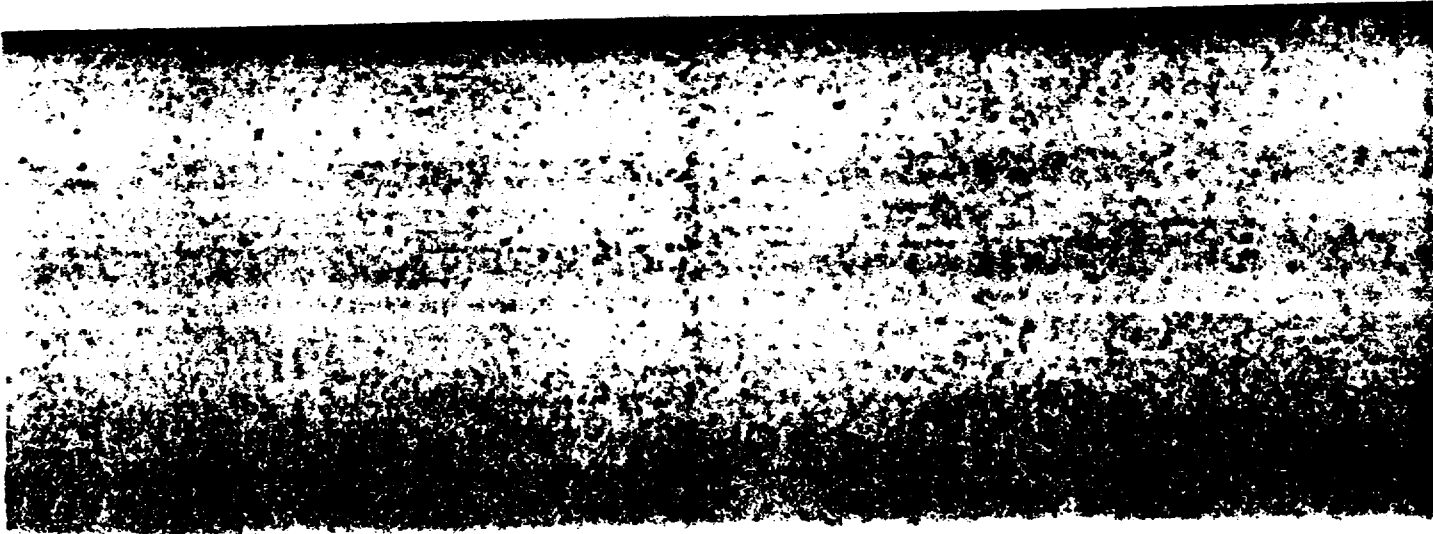
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NJDEP COMMENTS ON DRAFT ~~REDACTED~~

RI/FS WORK PLAN.

ASB 002 0503

FF



William O'Sullivan, Bureau of Engineering and Technology,
Division of Environmental Quality
New Jersey Department of Environmental Protection
Comments on "Asbestos Dump" RI/FS

- a) We do not agree with the statement on page 2-25 that:

"The available information does not suggest that the National Oil and Hazardous Substances Contingency Plan imminent danger criteria are met at any of the four asbestos dump sites. While airborne asbestos fibers may constitute a health threat at the Pine Valley Tree Service and White Bridge Road Sites, the onset of wetter fall weather and snow cover will reduce potential respiratory threats."

Visible asbestos containing material remain at all four sites. The statement "wetter fall weather and snow cover will reduce potential respiratory threats" has little meaning since it is now mid-February. Initial remedial measures should include the following:

- 1) The United States Fish and Wildlife Service should be contacted again, advised of the potential hazard of the inhalation of airborne asbestos fibers at the Great Swamp Site, advised of the action being taken to eliminate the hazard under the Superfund.

- 2) The property owners of the Pine Valley Tree Service and White Bridge Road Sites should be contacted, advised of the potential risk and the work programs under way.
- b) Task 6 - "Permits, Right of Entry and Other Authorizations" (Page 3-6) In the event that field treatability studies are required during the Feasibility Study, other local, State and Federal permits should be included in addition to NPDES.
- c) All forty (40) ambient air sample analyses should employ the SEM/TEM methods in lieu of the proposal that thirty-four (34) samples be analyzed by the ACF method and six (6) samples by the SEM/TEM method (Table 5-3). The savings under the proposed method would be about sixteen thousand dollars (\$16,000). However, the value of the data by analyzing all sample by the SEM/TEM method may far outweigh the projected savings. Further, there is no explanation of how two (2) samples from each site would be selected to be indicative of the "worst case" conditions (Page 3-21). (Note: Four (4) sites with two (2) samples per site equals eight (8), not six (6).)
- d) Under Task 20 - "Identification of Development of Alternatives" all local, State and Federal regulations should be included, not just EPA and NJDEP Hazardous Waste Regulations.
- e) Consideration must be given to the "usability of the land" after the completion of the Feasibility Study work program. (Detail Development of Alternatives, (Page 3-45)).
- f) If not already accomplished, it is suggested that the Work Plan be reviewed by Ms. Susan Savoca, Esq. who drafted the asbestos landfill regulations for the Department. These rules can be used as guidelines for the remedial actions.

John Dickinson, Esq., Office of Regulatory Services,
New Jersey Department of Environmental Protection
Comments on "Asbestos Dump" RI/FS

Regarding William O'Sullivan's comment concerning the departments' regulations on the Disposal of Asbestos Waste, I have attached a copy of these regulations. It must be noted that these regulations are in the proposal stage and have not yet been adopted. Comments are being received by Susan Savoca, Esq. of this office until April 20, 1984. Once adopted these regulations may be utilized as guidelines for the design of remedial actions. Also of possible interest and application are the National Emissions Standards for Asbestos, 40 C.F.R. 61.01 et seq.

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
DIVISION OF ENVIRONMENTAL QUALITY

Solid Waste Management

Disposal of Asbestos Waste

Proposed Amendments: N.J.A.C. 7:26-1.4, 2.6, 2.10, 2.13, and 3.5

Authorized by: Robert E. Hughey, Commissioner

Authority: N.J.S.A. 13:1B-3, 13:1E-1 et seq., and
26:2C-1 et seq.

DEP Docket No.: 005-84-02

A public hearing concerning this proposal will be held on Wednesday, March 28, 1984 at 10:00 A.M. at the State Library, First Floor Auditorium, 185 West State Street, Trenton, New Jersey.

Interested persons may submit in writing, data, views, or arguments relevant to the proposal on or before April 20, 1984. These submissions, and any inquiries about submissions and responses, should be addressed to:

Susan Savoca
Office of Regulatory Services
Department of Environmental Protection
CN 402
Trenton, New Jersey 08625

At the close of the period for comments, the Department of Environmental Protection may adopt this proposal, with any minor changes not in violation of the rulemaking procedures at N.J.A.C. 1:30-3.5. Upon adoption of these rules, a notice of the adoption shall be published in the Register. The adopted rules shall become effective upon publication of that notice of adoption in the Register.

This proposal is known as PRN 1984 -

The agency proposal follows:

SUMMARY

The Department of Environmental Protection is proposing amendments to its regulations in order to enforce those portions of the National Emission Standards for Hazardous Air Pollutants ("NESHAPS") which deal with asbestos waste disposal.

On April 8, 1973 (38 FR 8826), the United States Environmental Protection Agency ("U.S. EPA") promulgated national emission standards for asbestos (40 CFR 61) pursuant to Section 112 of the federal Clean Air Act, as amended in 1970 (42 U.S.C. 7412). Since 1973, U.S. EPA has revised the

NESHAPS for asbestos several times. Section 112(d) of the Clean Air Act allows U.S. EPA to delegate its authority to implement and enforce NESHAPS to states which develop their own NESHAPS procedures and request delegation (40 USC 1412(d)). Where such authority is delegated, U.S. EPA retains concurrent authority to enforce the standards.

On September 30, 1981, the New Jersey Department of Environmental Protection requested that the U.S. EPA delegate its authority to implement and enforce certain categories of NESHAPS, including the asbestos requirements. U.S. EPA subsequently determined that the delegation should be granted and on October 18, 1982 a Notice of Delegation of Authority appeared in the Federal Register (47 FR 46276). This delegation allows the Department to implement and enforce the following NESHAPS regulations:

40 CFR 61.22(c)	(asbestos manufacturing operations)
40 CFR 61.22(e)	(spraying operations)
40 CFR 61.22(h)	(fabricating processes)
40 CFR 61.22(i)	(insulating materials)
40 CFR 61.25	(disposal as it relates to (c), (e), (h), (i))

Although the delegation did not include disposal of waste from asbestos mill operations (40 CFR 61.22(a)) and from demolition and renovation activities (40 CFR 61.22(d)), the Department is proposing to regulate the land-fill disposal of these wastes also. Further although the delegation included 40 CFR 61.22(i), this is not an asbestos waste-generating section and is therefore not included in this regulatory proposal.

The proposal requires generators to notify the Department in writing at least 10 days prior to disposing of asbestos-containing waste from asbestos mills, asbestos manufacturing operations, demolition and renovation activities, spraying operations, and fabricating processes. The notification will include the identity of the transporter and the disposal location. The Department will impose no specific packaging or handling requirements on the generator, as 40 CFR 61.22 (j) and (k) adequately address this matter.

The generator notification requirement differs from the NESHAPS requirement in two significant ways. First, the federal rules require prior notification only for disposal of demolition and renovation debris (40 CFR 61.22(d)). This proposal requires prior notification of disposal of waste from asbestos mills, asbestos manufacturing operations, spraying operations and fabricating processes, in addition to demolition and renovation debris. Second, the federal demolition and renovation notification requires EPA notification 10 days prior to commencement of the demolition and renovation activities (40 CFR 61.22(d)(2)), while this proposal requires notification 10 days prior to disposal of the waste generated by these activities.

The proposal makes the collector-hauler responsible for preventing asbestos emissions during transportation. This differs from the federal rules which place the burden of prevention of air emissions solely on the generator (40 CFR 61.22(j) and (k)). Transporters are prohibited from accepting and transporting asbestos waste which is not properly packaged. To reduce the possibility of rupture to containers, no intermediate storage or transfer is allowed.

Landfill owners and operators will be required to accept only properly packaged waste and to dispose of it in a manner that will prevent visible emissions. Again, this proposal differs from the federal rules which place the burden of proper disposal solely on the generator (40 CFR 61.22 (j) and (k)). The management requirements are based on 40 CFR 61 and include, generally, wetting and bagging. An exception is made for non-friable asbestos. Disposal is allowed only in the working face of a landfill in an excavated area so that, when buried, there will be three feet of cover between the top of the disposed waste and the working face. The three feet of cover in addition to the cover requirements of N.J.A.C. 7:26-2.5 is considered necessary so as to minimize the risk of container breakage due to heavy vehicle traffic at the working face. Landfills will also be required to maintain a separate daily record of all incoming asbestos waste and to submit it to the Department on a monthly basis.

If properly managed in accordance with the packaging requirements, the waste is classified as ID 27, Dry Industrial Waste, and can be disposed of at any sanitary landfill authorized to accept ID 27 waste.

SOCIAL IMPACT

This proposal will include in the regulatory scheme the Department's long-standing policy regarding the disposal of asbestos waste in sanitary landfills. As it is based on federal rules, additional but consistent requirements are contained therein. The burden of responsibility is expanded to fall on transporters and landfill owners/operators, as well as on the generator.

The generator notification and the landfill operating record requirements will enable the Department to obtain data regarding the amount and disposal patterns of asbestos waste in New Jersey.

ECONOMIC IMPACT

Generators and collector-haulers are expected to experience little economic impact from the proposal.

Landfill owners and operators may experience an increase in disposal costs due to the increased cover requirements. The additional cost is considered to be justified when compared to the health and environmental benefit that will accrue. Owners and operators who incur additional costs may petition the Board of Public Utilities for a rate increase to cover those costs.

ENVIRONMENTAL IMPACT

Asbestos has long been considered an environmental factor in the cause of certain illnesses and thus a health risk to those who are exposed to asbestos fibers in the air. Unless it is properly contained, asbestos can easily break into a dust of tiny fibers. These fibers float in the air and can easily be inhaled or swallowed. Once the fibers enter the body, disease (such as asbestosis, cancer, and mesothelioma) may result. Asbestos fibers remain in the body indefinitely. For these reasons, this

proposal reflects the Department's concern with minimizing the environmental contamination associated with uncontained asbestos.

Full text of the proposal follows (additions indicated in boldface type; deletions indicated in brackets [thus]).

7:26-1.4 Definitions

The following words and terms, when used in this chapter, shall have the following meanings unless the context clearly indicates otherwise.

...

"Asbestos" means actinolite, amosite, anthophyllite, chrysotile, crocidolite, and tremolite.

...

"Asbestos-containing waste" means any solid waste which contains any variety of asbestos which is produced by extracting asbestos from asbestos ore and is generated by a source subject to 40 CFR 61.22(a), 61.22(c), 61.22(d), 61.22(e), and 61.22(h).

...

"Non-friable asbestos-containing waste" means waste that contains one percent or less asbestos by weight and that cannot be crumbled, pulverized, or reduced to powder, when dry, by hand pressure.

...

7:26-2.6 Sanitary landfill operational requirements (Specific)

(a)-(d) (No change.)

(e) Rules concerning the disposal of asbestos and asbestos-containing waste in sanitary landfills include the following:

1. The owner or operator of a sanitary landfill may accept and dispose of asbestos and asbestos-containing waste which has been managed in the following manner:

i. Asbestos and asbestos-containing waste originating from sources subject to 40 CFR 61.22(c), (d), (e) and (h), except air pollution control device asbestos waste, shall have been sufficiently mixed or coated with water or an aqueous solution and sealed into leak-tight containers (such as 6 mil. plastic bags) while wet. The containers shall have been permanently sealed and labeled with a warning label that states:

CAUTION
Contains Asbestos
Avoid Opening or

Fracturing Container
Fracturing Asbestos is Hazardous
to Your Health

Alternatively, warning labels specified by Occupational Safety and Health Standards of the United States Department of Labor, Occupational Safety and Health Administration under 29 CFR 1910.93a(c)2ii may be used;

- ii. Air pollution control device asbestos waste originating from sources subject to 40 CFR 61.22(c), (d), (e) and (h) shall have been thoroughly mixed with water into a slurry and sealed into leak-tight containers (such as 6 mil. plastic bags) while wet. The containers shall have been permanently sealed and labeled in accordance with (e)ii, above;
- iii. In lieu of the requirements of (e)ii, and (e)iii above, the asbestos and asbestos-containing waste shall have been formed into non-friable pellets or other shapes.
- iv. All asbestos and asbestos-containing waste from asbestos mills subject to 40 CFR 61.22(a), shall have been adequately mixed with a wetting agent recommended by the manufacturer of the wetting agent to effectively wet asbestos mill dust and asbestos mill tailings and sealed into leak-tight containers (such as 6 mil. plastic bags) while wet. The containers shall be permanently sealed and labeled in accordance with (e)ii, above.
2. All asbestos and asbestos-containing waste accepted for disposal at a sanitary landfill shall be disposed of in the following manner:
 - a. Upon acceptance of the waste, a separate excavation immediately shall be prepared in the working face of the facility. Said excavation shall be of sufficient width and depth so as to allow the asbestos and asbestos-containing waste to be deposited such that a minimum of three (3) feet buffer exists between the top layer of the waste deposited and the top of the excavated site.
 - b. The asbestos and asbestos-containing waste shall be deposited in the excavation and the area immediately shall be covered with three (3) feet of earth or other cover material in a manner that prevents the rupture of the containers during burying operations. This requirement is in addition to the cover requirements of N.J.A.C. 7:26-2.5.
3. Acceptance of asbestos or asbestos-containing waste at a sanitary landfill for disposal shall be in accordance with the waste flow requirements of N.J.A.C. 7:26-6.

There shall be no visible air emissions during or after
recognition and disposal.

7:26-2.12 Generator Requirements for Disposal of Asbestos and Asbestos-Containing Waste

(a) A generator of asbestos or asbestos-containing waste shall submit a written notification of intent, in accordance with (b), and (c) below, to dispose of waste from asbestos mill operations, asbestos manufacturing operations, demolition and renovation activities, spraying operations, and fabricating processes which are subject to 40 CFR 61.22(a), (c), (d), (e) and (f) at least ten days prior to disposal of said waste.

(b) The written notification required by (a), above, shall include:

1. Name, address and telephone number of the generator;
2. Quantity of waste to be disposed;
3. Name, address, N.J.S.W.A. registration number of the collector-hauler;
4. Name and address of the landfill at which disposal will occur; and
5. A copy of any written notification required by 40 CFR 61.20 to 61.25.

(c) The written notification required by (a), above, shall be submitted to:

New Jersey Department of Environmental Protection
Division of Waste Management
Bureau of Field Operations
120 Route 156
Yardville, New Jersey 08620

7:26-2.13 Sanitary landfills; records

(a) Sanitary landfills shall maintain a daily record of wastes received. The record shall include:

1.-5. (No change.)

6. In addition to the information required in (a)1 through (a)5, above, sanitary landfills which accept asbestos and asbestos-containing waste shall:

i. Maintain a separate daily record of the asbestos and asbestos-containing waste received, which shall include:

(1) Date and time of delivery;

i. Identification of the collector-hauler by name and by N.J.A.C. registration number assigned to the collector-hauler;

ii. Quantity in cubic yards of the waste;

iii. Name and address of the generator; and

iv. For rejected shipments, the reason for rejection and disposition of the shipment after rejection; and

v. On the 15th day of every month, submit a copy of the daily record required by i, above, covering the asbestos disposal activity of the previous calendar month. The information shall be submitted to:

New Jersey Department of Environmental Protection
Division of Waste Management
Bureau of Registration and Permits Administration
32 East Hanover Street
Trenton, New Jersey 08625

(b)-(c) (No change.)

(d) Waste identification and definition of solids include the following:

1. Solid wastes; waste ID number and definitions:

i. - v. (No change.)

vi. 27 Dry industrial waste: Waste materials resulting from manufacturing, industrial and research and development processes and operations, and which are not hazardous in accordance with the standards and procedures set forth at N.J.A.C. 7:26-8. Also included are nonhazardous oil spill cleanup waste, dry nonhazardous pesticides, [and] dry nonhazardous chemical waste, and asbestos and asbestos-containing waste managed in accordance with 40 CFR 61 and N.J.A.C. 7:26-2.6.

(e)-(f) (No change.)

7:26-3.5 Collector-hauler requirements (Specific)

(a)-(d) (No change.)

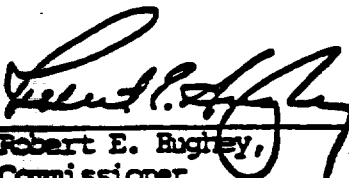
(e) Rules concerning collection/haulage of asbestos and asbestos-containing waste include:

1. All vehicles used for the collection and/or haulage of asbestos and asbestos-containing waste shall be of such a design so as to prevent any spillage or leakage or emissions therefrom.

3. No collector/trailer shall transport asbestos and/or asbestos-containing waste unless such waste is properly packaged in accordance with 40 CFR 61.21 and N.J.A.C. 7:26-2.6(e). In no case shall loose asbestos or asbestos-containing waste be transported.
4. The asbestos or asbestos-containing waste shall be transported in a manner that prevents the rupture of the asbestos containers in loading, transport, and unloading operations.
5. Asbestos waste shall be transported directly to the disposal facility. No intermediate storage or transfer of such waste is permitted.
6. Transportation and disposal of asbestos-containing waste shall be conducted in accordance with waste flow requirements of N.J.A.C. 7:26-2.6.
7. There shall be no visible air emissions during loading, transporting, or unloading operations.

2/6/84

DATE


Robert E. Hughes,
Commissioner

Robert Runyon, Division of Water Resources
New Jersey Department of Environmental Protection
Comments on "Asbestos Dump" RI/FS

Page 3-30 Task 16 - Aquatic Impact Assessment appears to be inappropriate considering the contaminants in question. The macroinvertebrate communities will not yield any useful information on the offsite impacts or effectiveness of remedial activities due to the nature of the contaminants involved.

George Klein, Hazardous Site Mitigation Administration,
Division of Waste Management,
New Jersey Department of Environmental Protection
Comments on "Asbestos Dump" RI/FS

Please find below my comments on the Work Plan for a Remedial Investigation/Feasibility Study, Asbestos Dump Site, Morris County, New Jersey.

1. Pursuant to National Gypsum's November 9, 1983 response to the USEPA Information request letter, specifically item 10 (off-site disposal), a mineral identification analysis is not necessary at any of the four (4) sites. In addition, this same correspondence identifies two other locations which should be investigated: 3 lots owned by Carmen Montesano on Union Avenue, Sterling, NJ, and an abandoned clay pit in Sterling Township.

2. Page 1-1, 1.1 Objectives

National Gypsum has stated that they are responsible for disposing of materials at these three (3) secondary sites.

3. Page 1-4, 1.4 Schedule

NUS should define what permits and authorization must be obtained, and how many days they are expecting to be delayed by adverse weather conditions.

4. Page 1-5, 1.4 Schedule

NUS states, "It is emphasized that the cost and manpower estimates presented above do not contain any provisions for the conduct of laboratory or field studies." The specific field studies referred to in this section should be better defined, i.e., does this include the field studies for the Aquatic Impact Assessment (Task 16) or the engineering properties of soils and asbestos waste (Task 15).

5. Page 2-6, 2.1.1 Site History and Description Millington Site

A reference is made to the use of an unlined settling lagoon for a discharge of waste paint from the paint wash line. What type of paint was used at the plant and couldn't this paint have infiltrated the groundwater as well as the surrounding soil. In this same section a reference is made to polyurethane foam block manufacturing at this site. What are the raw materials and waste materials involved in this manufacturing process?

6. Page 2-7, 2.1.1 Site History and Description Great Swamp Site

This description does not include an account of the drums observed buried in the outer boundaries of the disposal area, adjacent to the waters of the Great Swamp.

7. Page 1-7, 2.1.1 Site History and Descriptions Pine Valley Tree Service Site

The phrase in the last sentence on this page "may have also been" should read "has been".

8. Page 1-8, 2.1.1 Site History and Description White Bridge Road Site

The word "may" should be deleted from the second sentence.

9. Page 1-11, 2.1.2 Regulatory and Remedial Actions to Date, Great Swamp, Pine Valley Tree Service and White Bridge Road Sites

In the first sentence, BHM should read DHM.

10. Page 2-14, 2.2.2 Surface Water Pine Valley Tree Service and White Bridge Road Sites

This description should state that a small stream runs adjacent to the Pine Valley Tree Service site.

11. Page 2-24, 2.4 Previous Investigations and Evaluation of Existing Data Millington Site

The last sentence of the first paragraph states that soils may have become contaminated. Why isn't groundwater also mentioned as an impacted media?

12. Page 2-26, 2.5 Proposed Responses

The word "known" should be placed before the word contamination in the second paragraph and before the word "asbestos" in the third paragraph.

13. Page 3-3 Task 3 Community Relations, Support Functions

The file review should also include the local health department, fire department and public works department if applicable.

14. Page 3-5 Task 5 Health Safety and General Site Reconnaissance

What emergency provisions will be provided in the event a drum is ruptured by the power augur?

15. Page 3-6 Task 6 Permits, Rights of Entry and Other Authorization

Identify exactly what permits will be needed.

16. Page 3-7 Task 9 Site Specific Health and Safety Requirements

Please provide the Department with a copy of the NUS Superfund Division Health and Safety Manual.

17. Page 3-8 Task 10 Site Specific Health and Safety Requirements

The NUS Superfund Division Quality Assurance Manual must meet the minimum standards listed in the NJDEP document "Quality Assurance Project Management Plan".

18. Page 3-9 Task 11 Site Operations Plan

The specific health and safety and quality assurance requirements should be listed.

19. Page 3-9 Task 12 Mobilization of Field Equipment

Where will the office/equipment storage trailer be secured? Are the cost estimates for the necessary utilities included in Section 5.2 Cost and Budget?

20. Page 3-10 Task 13 Subsurface Investigation

Based on data gathered during this investigation, the groundwater investigations may have to be modified to include the two (2) privately owned sites, as well as the other sites identified by National Gypsum.

21. Page 3-11 Task 13 Subsurface Investigation; Hydrogeological Investigation

The monitoring wells must be installed in accordance with NJDEP DWR monitor well installation guidelines.

22. Page 3-19 Task 13 Subsurface Investigation, Decontamination Procedures

The detailed decontamination procedures for drilling and sampling equipment must be specified prior to the initiation of any field work.

23. Page 3-20 Task 15 Environmental Sampling and Monitoring Ambient Air

In order for these samples to accurately reflect the potential problems at the site, the site conditions should be indicative of when the problem will manifest itself. With respect to the asbestos fibers, this would mean a mechanical agitation of the fragmented shingle materials.

24. Page 3-25 Task 15 Environmental Sampling and Monitoring Surface Water and Sediment

The specific chemicals that will be analyzed as Hazardous Substance List (HSL) Organics and Inorganics must be specified. This analysis should include the EPA designated Priority Pollutants plus the tentative identification of 40 non-priority pollutants with the greatest concentration in each of the following fractions.

- (15) fifteen in the purgeable organic fraction
- (10) ten in the acid extractable organic fraction
- (15) fifteen in the base/neutral organic fraction

25. Page 3-27 Task 15 Environmental Sampling and Monitoring Groundwater

Individual laboratory certified clean bailers should be used at each individual well. This analysis should be for the same compounds as in comment #24 above.

26. Page 3-30 Task 16 Aquatic Impact Assessment

Is it necessary for this study to be this detailed? If so, please provide a justification for this Task.

27. Page 3-32 Task 17 Data Reduction and Evaluation

The significant contaminant pathways should be determined by the Pool Subcontractor, NUS, EPA and NJDEP.

28. Page 3-44 Task 22 Laboratory and Field Studies

Please provide the technical justification for the two types of tests proposed, adsorption isotherms and contaminate break through. This testing seems more like a research project.

29. Page 4-5 Project Management Task 3 Project Initiation

The project initiation meeting should include NJDEP.

30. Page 4-6 Project Management Task 4

Quality Assurance and Health and Safety Oversight. The site operations Plan page 4-6 and the Health and Safety Plan page 4-8 should be approved by NJDEP and EPA prior to the commencement of site activities.

31. Page 5-1 5.0 Cost and Schedules

5.1 Project Schedule. Specifically, what permits and other authorizations will NJDEP be required to provide assistance for?

Page 5-4 How many days does NUS expect to loose due to inclement weather.

32. Page R-8 and R-9 References

All reference to the "Bureau of Solid Waste Management" should read the Bureau of Site Management.

HS17/cs

Linda Welkom, Division of Water Resources
New Jersey Department of Environmental Protection
Comments on "Asbestos Dump" RI/FS

I have reviewed the Work Plan RI/FS prepared for the Millington Asbestos dump dated December 1983, and found it to be an adequate preliminary assessment of the situation. However the work plan is deficient in certain areas. One area inadequately addressed is additional points of contamination such as floor drains, septic tanks, or underground tanks.

Pollutants may include asbestos, phenylmercuric acetate, paint sludges, fuel oil or manufacturing process sludge. These wastes may also adversely impact the ground water. Test pits, soil borings and monitor wells will provide a subsurface stratigraphic record and assist in a hydrogeologic evaluation.

Comments

1. ALL WELLS INSTALLED MUST STRICTLY ADHERE TO THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NJDEP) WELL SPECIFICATIONS. (Please refer to attached well specifications for details).
2. All sampling procedures for soil and water must adhere to NJDEP sampling and analytical standards.

Corrections and Additions

Page 2-15, 2.2.3 Geology - The site is bounded on the west by the Passaic River.

Page 2-15, 2.2.4 Groundwater - Ground water flows within the Brunswick Shale through fractures, joints and other openings. These are usually more developed when aligned with the strike of the formation thus ground water would tend to travel preferentially along strike of the formation, although complexity of the fracture patterns allows for additional directional flow. At the Millington site the topography and proximity to the Passaic River will probably control the direction of the shallow ground water flow, which would be towards the river.

Re: Millington Asbestos Dump, Review of Draft Work Plan Remedial Investigation/
Feasibility Study (RI/FS)

Recommendations

Additional upstream investigation of the Great Brook and Black Brook area is warranted. The relative fiber count of 783 fibers/ml. from the river upstream of the Millington site vs. the count of 590 fibers/ml. downstream indicates another source.

- Although the ground water contamination route is probably not significant, I feel that due to the complexity of flow within the Brunswick shales it must be considered. Private wells downgradient from the sites, drawing from the bedrock should be tested and evaluated.

Hydrogeologic investigation of the Millington Site can best be done by test pits, soil borings and then, if necessary, monitor wells.

A. Test Pits

Test pits should be installed first. The proposed locations for the test pits are adequate. An additional pit 50 to 60 feet east of well #903 is recommended.

Test pits are recommended because they will give: 1) an rapid overview of subsurface geology, 2) representative vertical extent of the dump, 3) depth to water table, if within the overburden, 4) depth to bedrock and 5) help identify the fill material. Piezometers may be installed at selected pits, if needed, but only under the supervision of a New Jersey licensed driller. The pits not used must be backfilled.

B. Soil Borings

These should be done prior to the installation of monitor wells. The borings should be advanced using a hollow stem auger to the top of bedrock at the selected sites. These and the sequence suggested for augering is satisfactory. An additional boring/monitor wells is needed approximately 200 feet to the north of well #902. Split spoon samples should be taken at 2.5-foot intervals, changes in strata and at zones showing obvious contamination. Borings #903, 906 and 905 will be continuous split spoons to establish the stratigraphic sequence and character of the overburden and dump materials.

Re: Millington Asbestos Dump, Review of Draft Work Plan Remedial Investigation/
Feasibility Study (RI/FS)

C. Monitor Wells

The aquifer at the Millington site will be defined from the test pits and/or soil borings. The monitor wells should follow the NJDEP specifications for either Unconsolidated or Rock Monitor Wells. If the static water level is greater than 15 feet I recommend the installation of four inch I.D. overburden wells.

Page 3-13 - The use of a bentonite cement grout does not meet with the latest NJDEP specifications. Granular or powder bentonite (only) should be used in a mixture of 1.5 lbs. of bentonite/gallon of potable water. This mixture should be tremied into the hole to avoid gaps within the seal. Bentonite pellets will not be necessary.

Page 3-13 - The Great Swamp Site - The option of turning the 15-20 borings into monitor wells is excessive. Pending field evaluation of the boring results, some wells could be sealed as per NJDEP well abandonment specifications.

An alternate casing method is possible for these wells, consisting of a steel casing and threaded PVC screen. The well can be secured by a cap held in place by a lockable latch apparatus. Wells are not to penetrate any major confining layer (defined by the borings/test pits).

Page 3-27, Task 15 - It is recommended that the ground water samples from the monitor wells be tested for the Priority Pollutants, Plus 40.

Page 3-30, Task 19 - A detailed ground water contour map should be prepared from the water level data obtained from the wells.

LW:clb

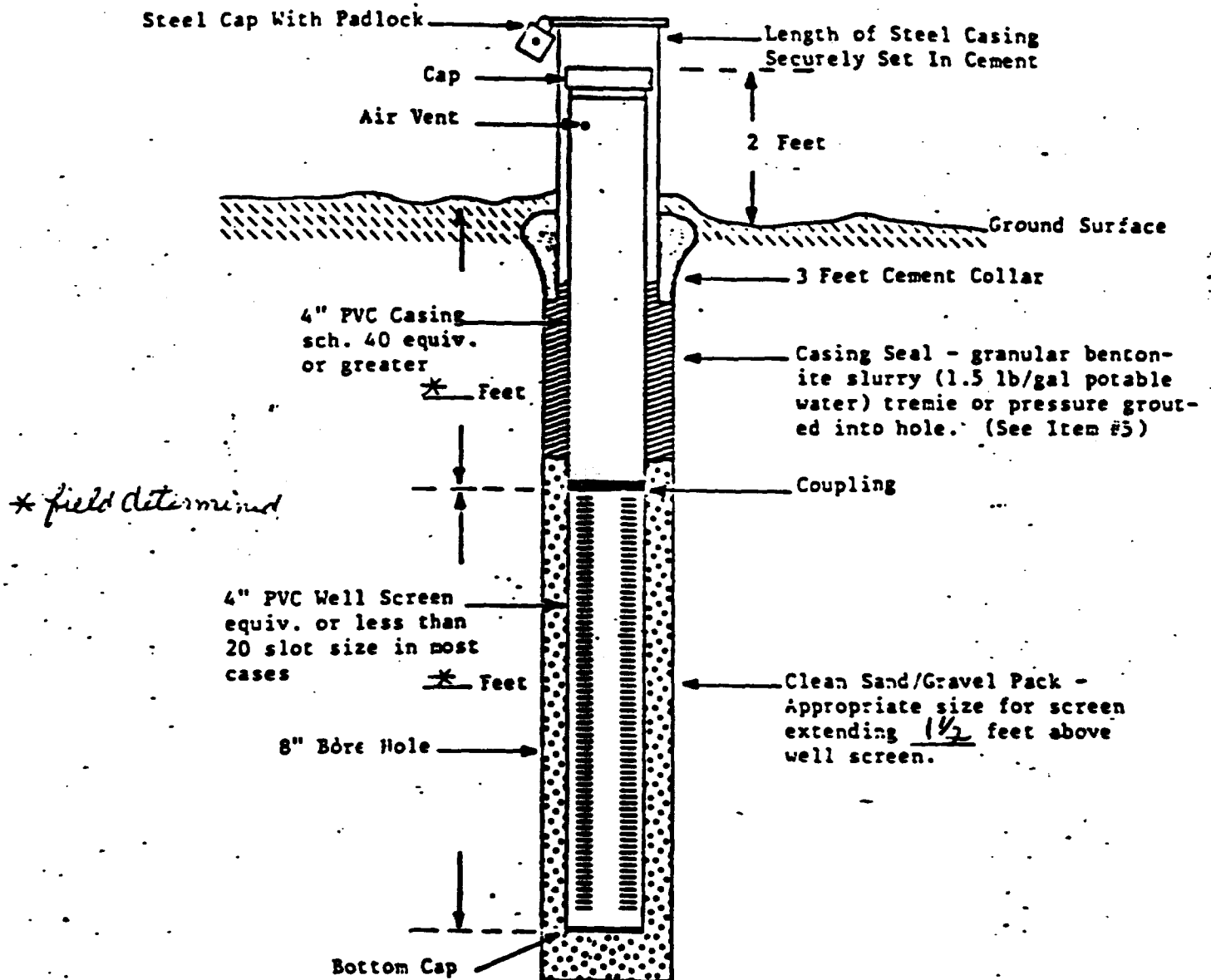
Attachments

New Jersey Department of Environmental Protection Unconsolidated Monitor Well Specifications*

Site Name: Millington Asbestos Dump

Location: _____

Date: 3/84



NOT TO SCALE

REQUIREMENTS:

1. Notification to the NJDEP is required two (2) weeks prior to drilling.
2. State well permits are required for each monitor well constructed by the driller. Report "use of well" on well permit application. Permit number must be permanently affixed to each monitor well. NOTE: Well driller must be licensed in the State of New Jersey.

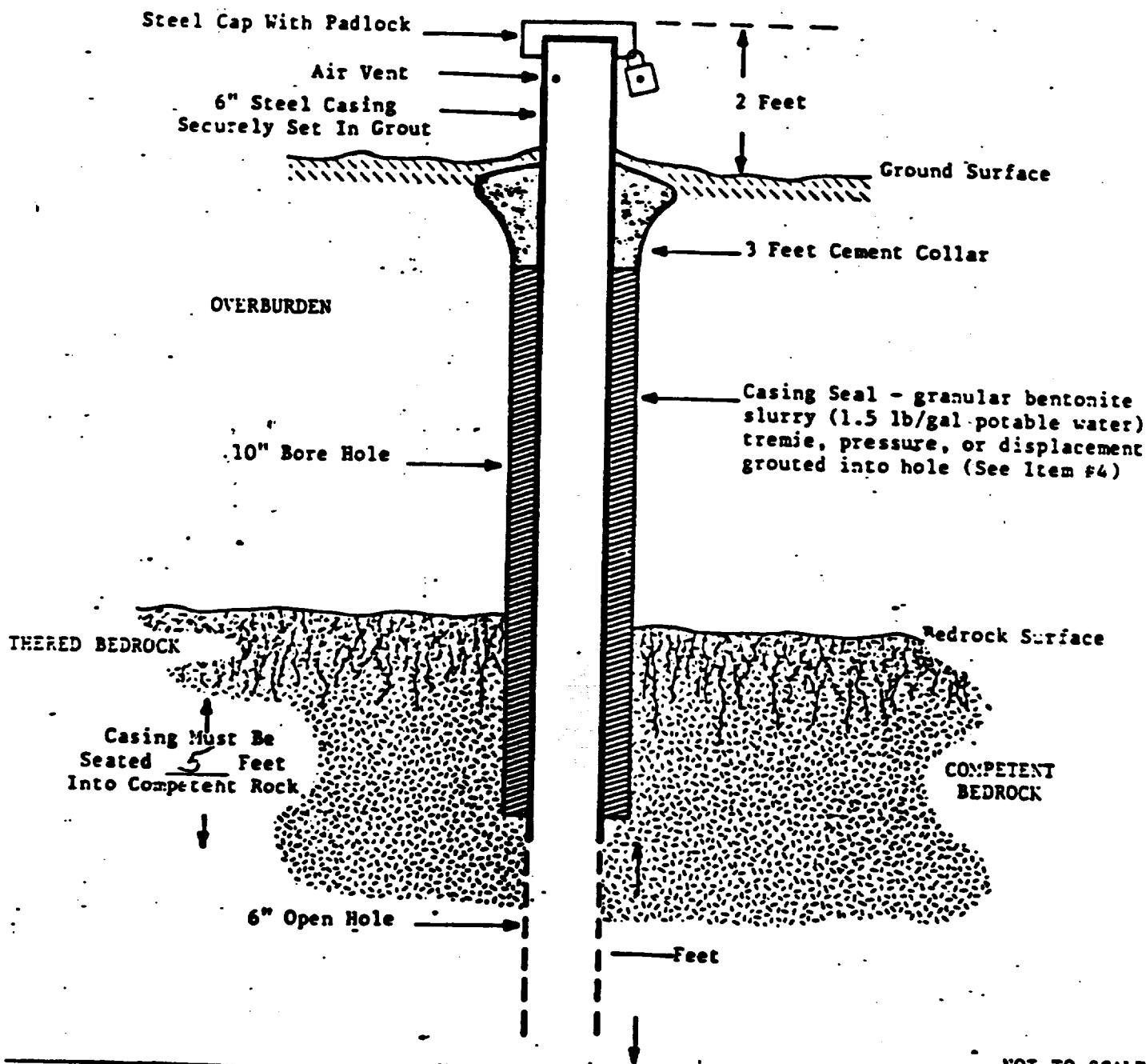
OVER PRINT

New Jersey Department of Environmental Protection
Rock Monitor Well Specifications*

Well Name: Millington Asbestos Dump

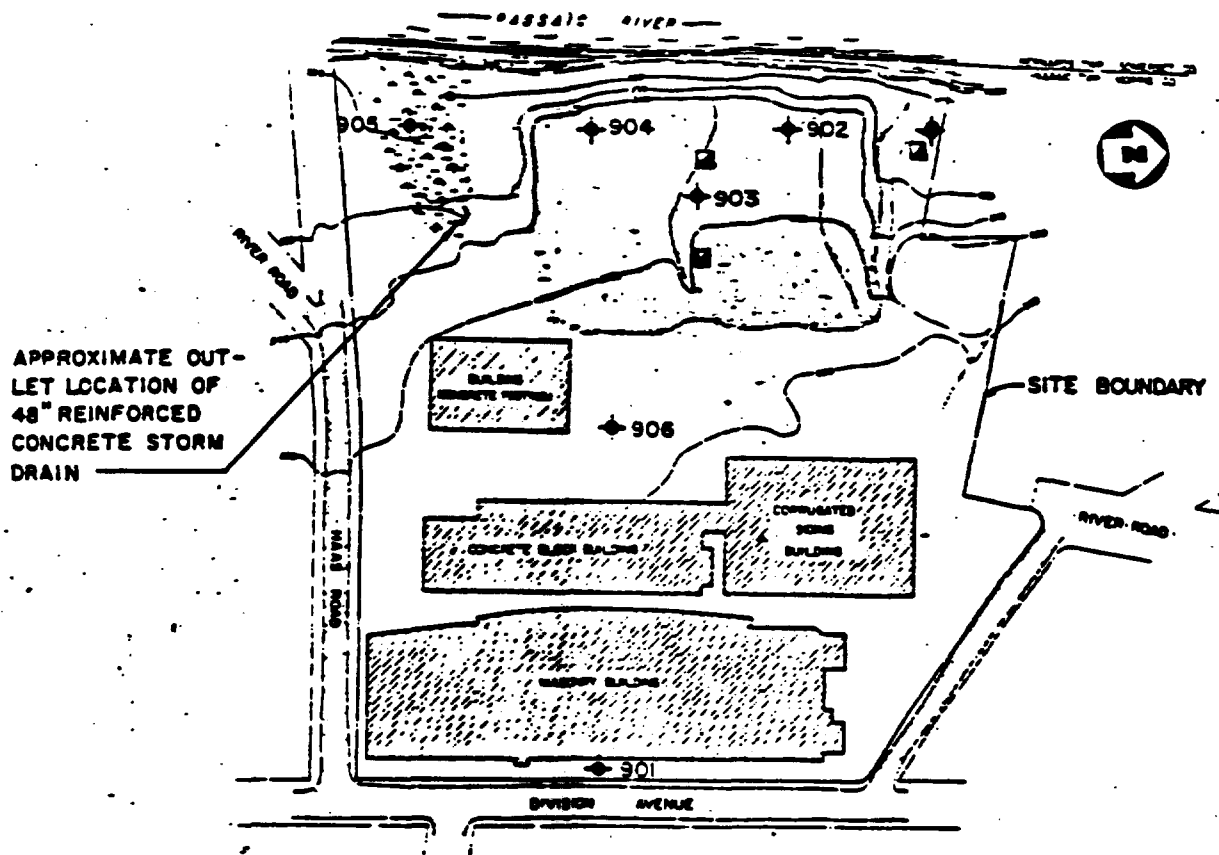
Location: _____

Date: 3/84



REQUIREMENTS:

Notification to the NJDEP is required two (2) weeks prior to drilling. State well permits are required for each monitor well constructed by the driller. Report "use of well" on well permit application. Permit number must be permanently affixed to each monitor well. NOTE: Well driller must be licensed in the State of New Jersey.



SOURCE: TAKEN FROM DRAWING NO 6657; AUGUST 17, 1977; YANNAKONE ASSOCIATES, INC.
 BERNARDSVILLE, NJ
 BUILDINGS: TIFA, LTD. OFFICE COMPLEX

LEGEND

- | | |
|---------------------------------------|----------------------------------|
| ◆ PROPOSED MONITORING WELL LOCATION | ◆ <i>Additional monitor well</i> |
| ■ PROPOSED TEST PIT LOCATIONS | ■ <i>Additional test pit</i> |
| — APPROXIMATE LIMIT OF ASBESTOS MOUND | |
| — SWAMPLAND | |

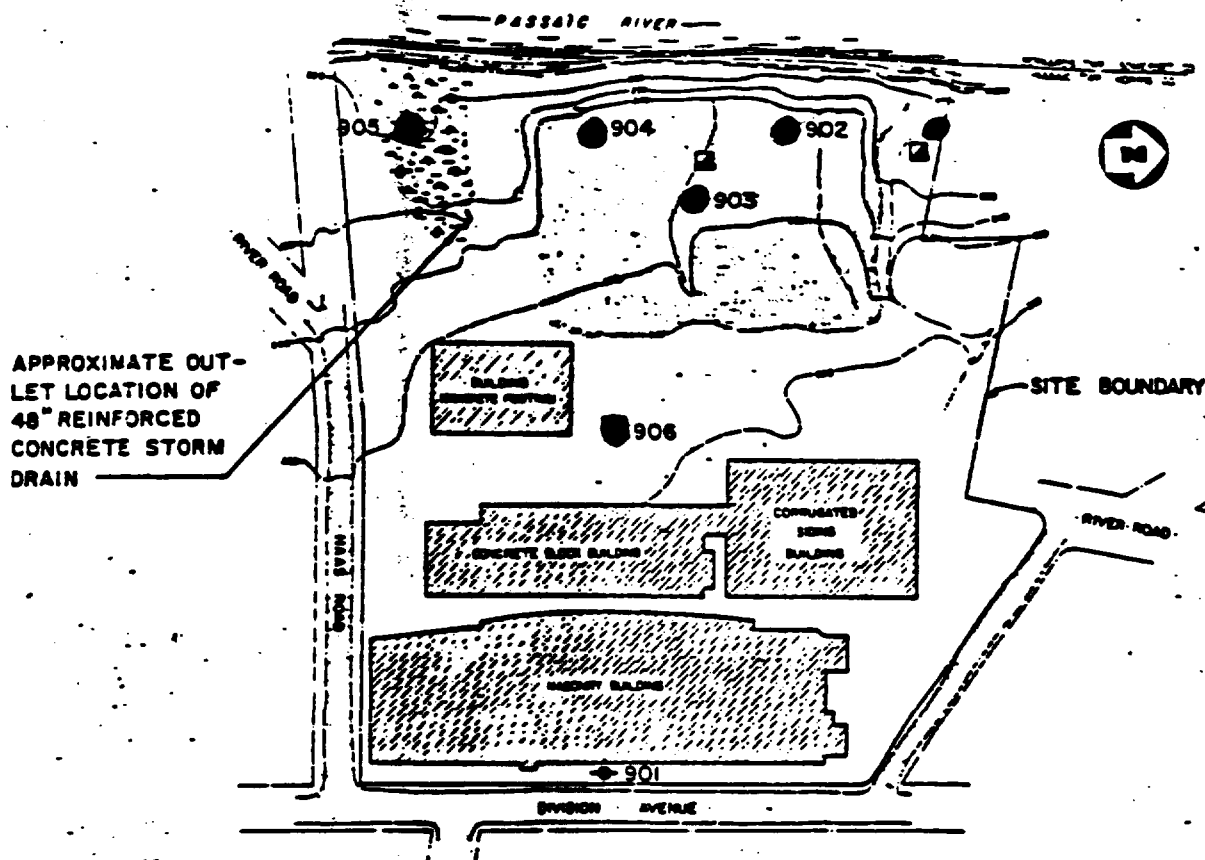
PROPOSED SUBSURFACE INVESTIGATION
MILLINGTON SITE
ASBESTOS DUMP, MILLINGTON, NJ
 SCALE 1" = 200'

3-12

FIGURE 3-1



ASB 002 0527



SOURCE: TAKEN FROM DRAWING NO 6857; AUGUST 17, 1977; YANNACONE ASSOCIATES, INC.
 BERNARDSVILLE, NJ
 BUILDINGS: TIFA, LTD. OFFICE COMPLEX

LEGEND

- ◆ PROPOSED MONITORING WELL LOCATION
- PROPOSED TEST PIT LOCATIONS
- APPROXIMATE LIMIT OF ASBESTOS MUD
- ▨ SWAMPLAND

● Soil Borings/Monitor Wells

PROPOSED SUBSURFACE INVESTIGATION MILLINGTON SITE ASBESTOS DUMP, MILLINGTON, NJ SCALE 1" = 200'

FIGURE 3-1